

REMARKS

Upon entry of the present amendment, claims 1-13 will remain pending in the above-identified application with claims 1-7 and 10-13 standing withdrawn from consideration based on an earlier restriction requirement of the Examiner, and claims 8-9 standing ready for further action on the merits.

Claim 8 has been amended. The present amendment to claim 8 does not incorporate new matter into the application as originally filed. In support of this contention the Examiner's attention is directed to page 32, lines 2-6 and page 74, lines 10-24 of the specification, which describe and measure only a thermal expansion coefficient and a humidity expansion coefficient of a magnetic tape.

...The addition of such an amount of the oxide particles is effective to control the thermal expansion coefficient and the humidity expansion coefficient of the magnetic tape in the widthwise direction to $(0 \text{ to } 8) \times 10^{-6}/^{\circ}\text{C}$ and $(0 \text{ to } 10) \times 10^{-6}\% \text{RH}$ *(Page 32, lines 2-6 of the instant specification.)*

<Thermal Expansion Coefficient and Humidity Expansion Coefficient of Tape>

A sample with a width of 12.65 mm and a length of 150 mm was prepared by cutting the magnetic sheet along the widthwise direction. The thermal expansion coefficient was determined from a difference between the length of the sample under an atmosphere of 20°C and 60%RH and the length of the sample under an atmosphere of 40°C and 60%RH. The humidity expansion coefficient was determined from a difference between the length of the sample under an atmosphere of 20°C and 30%RH and the length of the sample under an atmosphere of 20°C and 70%RH. The thermal expansion coefficient and the humidity expansion coefficient herein determined were relative to the tape widthwise direction. *(Page 74, lines 10-24 of the instant specification.)*

Accordingly entry of the instant amendment and favorable action on the merits is earnestly solicited at present.

Restriction Requirement

Applicants acknowledge their prior election of claims 8-9 for prosecution on the merits at present. Applicants reserve their right to file a divisional application on non-elected claims 1-7 and 10-13.

Claim Rejection Under 35 USC § 103(a)

Claims 8-9 have been rejected under the provisions of 35 USC § 103(a) as being unpatentable over **Ochi et al. US '415** (US 6,723,415) in view of **Tsukuda et al. US '381** (US 6,797,381).

Reconsideration and withdrawal of the above rejection is respectfully requested based on the following considerations.

Legal Standard for Determining Prima Facie Obviousness

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

“There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.” *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998) (The combination of the references taught every element of the claimed invention, however without a motivation to combine, a rejection based on a *prima facie* case of obvious was held improper.).

“In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification.” *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. “The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.” *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The Supreme Court of the United States has recently held that the teaching, suggestion, motivation test is a valid test for obviousness, but one which cannot be too rigidly applied. See *KSR Int'l Co. v. Teleflex Inc.*, 127 SCt 1727, 82 USPQ2d 1385 (U.S. 2007). The Supreme Court in *KSR Int'l Co. v. Teleflex, Inc.*, *ibid.*, reaffirmed the Graham factors in the determination of obviousness under 35 U.S.C. § 103(a). The four factual inquiries under Graham are:

- (a) determining the scope and contents of the prior art;
- (b) ascertaining the differences between the prior art and the claims in issue;
- (c) resolving the level of ordinary skill in the pertinent art; and
- (d) evaluating evidence of secondary consideration.

Graham v. John Deere, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (U.S. 1966).

The Court in *KSR Int'l Co. v. Teleflex, Inc.*, *supra.*, did not totally reject the use of "teaching, suggestion, or motivation" as a factor in the obviousness analysis. Rather, the Court recognized that a showing of "teaching, suggestion, or motivation" to combine the prior art to meet the claimed subject matter could provide a helpful insight in determining whether the claimed subject matter is obvious under 35 U.S.C. § 103(a).

Even so, the Court in *KSR Int'l Co. v. Teleflex, Inc.*, *ibid.*, rejected a rigid application of the "teaching, suggestion, or motivation" (TSM) test, which required a showing of some teaching, suggestion, or motivation in the prior art that would lead one of ordinary skill in the art to combine the prior art elements in the manner claimed in the application or patent before holding the claimed subject matter to be obvious.

Accordingly, while the courts have adopted a more flexible teaching, suggestion, motivation (TSM) test in connection with the obviousness standard based on the *KSR v. Teleflex*

case, which case involved a mechanical device in a relatively predictable technological area, it remains true that, despite this altered standard, the courts recognize inventors face additional barriers in relatively unpredictable technological areas as noted in *Takeda Chemical Industries, Ltd. v. Alphapharm Pty., Ltd.*, 83 USPQ2d 1169 (Fed. Cir. 2007).

Further, the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336, quoted with approval in *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007).

Distinctions Over the Cited Art

The USPTO asserts that Tsukuda et al. US ‘381 teach the desirability of minimizing the coefficient of thermal expansion and humidity expansion when the film is used as a magnetic media support. However, the coefficients of thermal expansion and humidity expansion described in column 4, lines 33-51 of Tsukuda et al. are those of a “film” used as a support of a magnetic recording medium. Column 4, lines 33-51 of Tsukuda et al. US ‘381 are reproduced immediately below for the Examiner’s convenience.

When the coefficient of thermal expansion of the film of the present invention is in a range of -1×10^{-5} to 4.0×10^{-5} a change in size with temperature is small. When such a film is used in a magnetic recording medium, the medium has satisfactory recording/reproducing characteristics.

The heat shrinkage at 200° C. (for 5 minutes) of the film of the present invention is preferably 3% or less at least in one direction, more preferably in all

directions. When thermal dimensional stability is outside of this range, deterioration of planarity, such as curling, will easily occur in the processing steps of the product. In addition, a change in size is significant when it is stored at high temperatures. Such a change is not preferable in view of recording/reproducing characteristics.

It is preferable that the coefficient of hygroscopic expansion of the film of the present invention be 10×10^{-5} or less, since a change in size due to a change in humidity and moisture absorption is small and satisfactory recording/reproducing characteristics are achieved when it is used in a magnetic recording medium.

In contrast to such teachings in Tsukuda et al. US '381, the coefficients of thermal expansion and humidity expansion of a support of the instant invention is clearly explained at pages 43 and 44 of the present specification as follows:

<Non-Magnetic Support>

The coefficient of thermal expansion in the widthwise direction of a non-magnetic support is preferably within a range of $(-10 \text{ to } +8) \times 10^{-6}/^{\circ}\text{C}$, more preferably $(-10 \text{ to } +5) \times 10^{-6}/^{\circ}\text{C}$. If the coefficient of thermal expansion is outside the above range, off-track occurs, and the error rate increases, because the thermal expansion coefficient of the magnetic tape in the widthwise direction is outside the range of $(-8 \text{ to } +8) \times 10^{-6}/^{\circ}\text{C}$.

The coefficient of humidity expansion in the widthwise direction of the non-magnetic support is preferably within a range of $(0 \text{ to } 10) \times 10^{-6}/\% \text{RH}$, more preferably $(0 \text{ to } 7) \times 10^{-6}/\% \text{RH}$. If the coefficient of humidity expansion is outside the above range, off-track occurs, and the error rate increases, because the humidity expansion coefficient of the magnetic tape in the widthwise direction is outside the range of $(0 \text{ to } 10) \times 10^{-6}/\% \text{RH}$.

However, such values are completely different from the coefficients of thermal expansion and humidity expansion of a magnetic tape as recited in claim 8 of the present application. In particular, in instantly amended claim 8 the following properties are recited:

...the thermal expansion coefficient of the *magnetic tape* in the tape widthwise direction is $(0 \text{ to } 8) \times 10^{-6}/^{\circ}\text{C}$, and the humidity expansion coefficient of the *magnetic tape* in the tape widthwise direction is $(0 \text{ to } 10) \times 10^{-6}/\% \text{RH}$
(emphasis added)

Therefore, it is submitted that the subject matter recited in instant claims 8 and 9 (*which claim 9 depends from claim 8*) is in no way rendered obvious by the combined teachings of Ochi et al. US '415 in view of Tsukuda et al. US '381.

In this regard, the cited Ochi et al. reference completely fails to provide any teaching or reason or rationale that would allow one of ordinary skill in the art to arrive at the instant invention recited in pending claims 8-9, including all of its recited limitations. Likewise, the teachings and disclosure of Ochi et al. US '415 fails to remedy the above-noted deficiency of the Tsukuda et al. US '381 reference, and thus, one of ordinary skill in the art, upon combining the disclosures of the two cited art references, would be completely incapable of arriving at the instant invention as instantly claimed.

Any contentions of the USPTO to the contrary must be reconsidered at present.

CONCLUSION

Based upon the amendments and remarks presented herein, the Examiner is respectfully requested to issue a Notice of Allowance clearly indicating that each of pending claims 8-9 are allowed and patentable under the provisions of Title 35 of the United States Code.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John W. Bailey (Reg. No. 32,881) at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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